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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,040	01/29/2002	Eric Baer	A-7273	2689

7590 01/29/2004

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EXAMINER	
BISSETT, MELANIE D	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/058,040	BAER ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1003* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. The request filed on 10/7/03 for Continued Examination under 37 CFR 1.114 based on parent Application No. 10/058,040 is acceptable and an RCE has been established. An action on the RCE follows.

2. The rejections set forth in the final rejection mailed 5/7/03 have been maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 19-23 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffman et al. in view of Pearson et al. (WO 96/10053).

5. From a prior Office action:

> Huffman et al. discloses a coextruded multilayer laminate structure used to make a package. The laminate structure has a paper substrate and a multilayer coextrusion including a barrier layer of EVOH, a tie layer, and LDPE (see figure 1), meeting that aspect of claims 19 and 26.
>
> The laminate structure in Huffman et al. also includes a layer of LDPE coated on the side of the substrate opposite the side coated with the multilayer extrusion (figure 1, meeting claims 21 and 27). The laminate structure in Huffman et al. does explicitly disclose the use of an additional tie layer between the paper substrate and the laminate structure, but the use of such a layer is immediately envisioned within the reference. Huffman et al. teaches that the substrate should be flame- or corona-treated before the application of the multilayer structure in order to improve the adhesion of the multilayer to the substrate. Another commonly used and well-known method of improving the adhesion of two layers is to use an adhesive or tie layer. Therefore, such a practice is envisioned within the reference, which then meets claim 20.
>
> However, the barrier layer in Huffman et al. does not specify the exact composition of the EVOH or that the barrier layer is a blend of EVOH and an olefin polymer. Pearson et al. is included in the applicant's Information Disclosure Statement dated July 1, 2002. It discloses a barrier layer

(page 2, line 28) made from a blend of PE and EVOH that meets the blend requirements of claims 19 and 26 (page 4, lines 16- 30), the EVOH composition of claims 22 and 28 (page 11, lines 3-4), and the polyolefin of claims 23 and 29 (page 3, lines 21-25).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the blend barrier layer in Pearson et al. in the multilayer laminate in Huffman et al. The motivation for doing so would be to utilize the material's good oxygen barrier properties. Therefore it would have been obvious to combine Pearson et al. with Huffman et al. to obtain the invention as specified in claims 19-23 and 26-29.

6. Claims 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffman et al. in view of Pearson et al. as applied to claims 19-23 and 26-29 above, and further in view of either Bradfute et al. or Rosenbaum et al.

7. From a prior Office action:

The combination of Huffman et al. and Pearson et al. is discussed above, but the references do not include the teaching that the adhesive tie layer is made from a modified PE. Both Bradfute et al. (column 3, lines 65-66) and Rosenbaum et al. (column 9, lines 65-66) show that it is known in the art that adhesive tie layers may be made from modified PE because of their advantageous adhesive properties.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use modified PE as the adhesive tie layer in the laminate structure taught by the combination of Huffman et al. and Pearson et al. The motivation for doing so would be to improve the interlayer adhesion in the laminate. Therefore it would have been obvious to combine the knowledge in Bradfute et al. or Rosenbaum et al. with Huffman et al. and Pearson et al. to obtain the invention as specified in claims 24 and 30.

8. Claims 19-22 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffman et al. in view of the combined teachings of Svensson (EP 423511 A1) and Harita et al.

9. From a prior Office action:

Huffman et al. is discussed above, but does not specify the exact composition of the EVOH, that the barrier layer is a blend of EVOH and an olefin polymer, nor does it explicitly disclose the presence of a tie layer between the substrate and the multilayer structure.

Svensson is discussed in the previous office action and teaches that a blend of PE and EVOH provides a useful barrier layer for food packaging (column 5, line 41 and figure 1). The ratio of EVOH and PE in the blend meets the restrictions of claims 19 and 26 (column 4, lines 6-16), and figure 2 discloses the use of an additional tie layer between the substrate and the blend barrier layer, which fulfills that aspect of claim 20. However, there is no mention of the ethylene content of the EVOH copolymer.

Harita et al. teaches that EVOH having the applicant's claimed amount of ethylene (claims 22 and 28) is commonly used in food packaging applications because of its barrier properties.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the blend barrier layer in Svensson with the EVOH content taught in Harita et al. as the barrier layer in the multilayer structure in Huffman et al. The motivation for doing so would be to utilize the barrier properties of the blend barrier layer. Therefore it would have been obvious to combine Svensson and Harita et al. with Huffman et al. to obtain the invention as specified in claims 19-22 and 26-28.

10. Claims 23, 25, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffman et al. in view of the combined teachigns of Svensson and Harita et al. as applied to claims 19-22 and 26-28 above, and further in view of Charrier.

11. From a prior Office action:

The combination of Huffman et al., Svensson, and Harita et al. is discussed earlier in this action. However, the combined teachings of these references do not explicitly disclose that the PE in the EVOH/PE blend barrier layer is LDPE, teaching only the use of a general PE. Charrier teaches that regular PE encompasses LDPE. Therefore, Svensson encompasses the blend of EVOH and PE the applicant claims in claims 23 and 29.

As already discussed, Svensson teaches the blend ratios of PE to EVOH found in claims 25 and 31 and Harita et al. teaches the ethylene content of the EVOH in claims 25 and 31. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to use LDPE in the multilayer structure taught by the combination of Svensson and Harita et al. and to use the specific compositions that the applicant claims. The motivation for using LDPE would be that Svensson's disclosure of regular PE includes the use of LDPE. The motivation for using the specific composition the applicant claims would be that the references teach towards such a composition. Therefore it would have been obvious to combine Charrier with the combined teachings of Harita et al., Svensson, and Huffman et al. to obtain the invention as specified in claims 23, 25, 29, and 31.

12. Claims 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffman et al. in view of the combined teachings of Svensson and Harita et al. as applied to claims 19 and 26 above, and further in view of either Bradfute et al. or Rosenbaum et al.

13. From a prior Office action:

> The combination of Svensson, Harita et al., and Huffman et al. is discussed above, but the references do not include the teaching that the adhesive tie layer is made from a modified PE. Both Bradfute et al. (column 3, lines 65-66) and Rosenbaum et al. (column 9, lines 65-66) show that it is known in the art that adhesive tie layers may be made from modified PE because of their advantageous adhesive properties.
>
> At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use modified PE as the adhesive tie layer in the laminate structure taught by the combination of Huffman et al., Svensson, and Harita et al. The motivation for doing so would be to improve the interlayer adhesion in the laminate. Therefore it would have been obvious to combine the knowledge in Bradfute et al. or Rosenbaum et al. with Huffman et al., Svensson, and Harita et al. to obtain the invention as specified in claims 24 and 30.

Response to Arguments

14. In response to the applicant's arguments that unexpected results have been shown for the blend of EVOH and polyolefin, it is noted that the results are not comparative with the closest prior art. In this case, the closest prior art would be the primary reference, Huffman et al. Huffman shows a laminate structure using 100% EVOH as a barrier layer. The oxygen barrier properties of the applicant's blend layers have not been compared with the 100% EVOH layer. Furthermore, the barrier properties of layers containing EVOH would be *expected* to improve with increasing EVOH content, since EVOH is the oxygen barrier material used in the blend. Further

still, the Pearson reference states that *dramatic* improvements in barrier properties are noted with increasing EVOH content (p. 11 lines 19-26).

15. Regarding the applicant's argument that the secondary reference, Pearson, teaches that higher contents of EVOH are not preferred because of the cost, note that Pearson teaches the use of 35-40% EVOH, which overlaps the applicant's claimed range. The reference as a whole teaches the claimed range. Also, Svensson has been used to show the benefits of the blend. Svensson teaches a preferred range of 20-50% EVOH, most preferably about 40% EVOH (col. 4 lines 6-16). This overlaps the applicant's claimed range.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700